

**APPLICATION**

**FOR**

**UNITED STATES LETTERS PATENT**

**OF**

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**FOR**

**SECONDARY VERTICAL LATCHING LEVER AND  
SECONDARY HORIZONTAL LATCHING LEVER HOLSTERS**

## REFERENCE TO RELATED APPLICATION

This application is a continuation-in-part of Serial No. 10/199,191 filed July 19, 2002, which claims benefit of U.S. Provisional Patent Application Serial No. 60/308,050  
5 filed July 25, 2001, and hereby claims the benefit of the embodiments therein and of the filing date thereof and is incorporated herein by reference.

## BACKGROUND OF THE INVENTION

10 From the earliest days in the development of the handgun holster, the need has been recognized for the holster to include a retention component to provide the user with some assurance that the handgun will not fall out, be dislodged or be subject to unauthorized removal. Classically, a holster flap or strap has acted as such a primary restraint. Both of these types have proved effective.

15 It has since been recognized that supplementary restraints are desirable. One of the earliest important supplementary restraints, in addition to a strap or flap, appeared in U.S. Patent 3,630,420 to John E. Bianchi on December 28, 1971, in which the handgun is restricted from withdrawal by a pocket which engages the handgun cylinder and a spring which together restrain the handgun from being drawn upward and allow  
20 drawing of the handgun only through a forward slot in the holster body.

For semi-automatic weapons, which have no cylinder, a variety of secondary restraints have been utilized. The most common approach has been to engage the trigger guard when the handgun is in place in the holster to be drawn only by

disengaging a trigger guard release. Examples of such secondary restraints are illustrated in the following U.S. patents:

4,256,243	Bianchi et al.	03/17/81
4,277,007	Bianchi et al.	07/07/81
5,129,562	J. E. Bianchi	07/14/92
5,199,620	Beletsky	04/06/ 93
5,246,153	Beletsky	09/21/93
5,918,784	Serpa	07/06/99
6,085,951	R. Beletsky et al.	07/11/00

These patents illustrate the intense efforts which have gone into development of secondary trigger guard-type restraints, yet continuing improvements are underway.

## BRIEF DESCRIPTION OF THE INVENTION

Faced with this state of the art, we have produced some simple, yet effective, secondary retention device holster designs providing automatic engagement upon holstering the handgun, one employing a vertical thumb release and others using a horizontal finger release for withdrawal of the handgun.

In the first embodiment, a spring loaded pivoted lever within an inboard housing is employed as the secondary restraint. The lever is pivoted about a generally horizontal shaft or pin at approximately the lever's midpoint constituting a first class type lever. A concealed spring, preferably a coil spring, is located within the inboard portion of the holster body and biases the trigger guard engaging portion of the lever into a restraining position within the trigger guard of the handgun when it is in holstered position.

The secondary retention device of this invention is preferably employed in a thumb break-type holster and is located below the thumb break. This allows a continuing motion of the thumb downward to first disengage the primary retention strap at the thumb break, and then to continue downward to engage the operating end of the secondary retention device, press it inward, release the trigger guard, and allow smooth drawing of the handgun by an upward arm and hand movement.

In an alternate embodiment, a two-lever system is used. The two levers reside in the inboard housing. These horizontal levers are fulcrumed with vertical pins. The user applies finger pressure to the end of a first lever, which pivots about a first fulcrum and contacting a second lever, which rotates about a second fulcrum. The second lever

houses a compression coil spring, which pushes the second lever outward to catch the gun's trigger guard. As the first lever rotates the second lever, the projection that engages the trigger guard rotates inward. With this projection rotated inward, the user may withdraw the gun upwardly. When the user releases the first lever, the spring

5 causes the levers to return to their original rested position. When the user returns the gun to the holster, the levers automatically move to catch the trigger guard when it is lowered to its home position.

The boss or projection includes a tapered outer edge to allow the trigger guard to displace the lever out of the way upon holstering a handgun and a planar inner edge for

10 blocking withdrawal of the handgun unless the lever is depressed. The first lever is easily actuated by movement of the middle finger of the hand during the grasping of the handgun grip. If the holster is of the thumb break type, the actuation of the trigger guard retention release is nearly simultaneous with the thumb release of the thumbbreak strap.

15 An additional embodiment utilizes a finger-operated latching lever positioned on the outside of the holster. The accessible surface of the lever is, or may be, made smoothly flush with the outside surface of the holster body, which tends to minimize the chance of inadvertent or unauthorized operation of the latching lever.

A further embodiment utilizes a similar lever arrangement in connection with a

20 type of holster known as concealment or pancake holster. Such holsters are made as flat as possible with no welt or a welt of minimum thickness and normally includes slots through which a wearer's belt is fed, holding the holster quite flat against the wearer's waist. Some earlier prior art efforts to produce a pancake holster with a blocking lever

to secure the handgun in place have resulted in less effective design because, in actuating a blocking lever with the first or trigger finger to release the handgun, the trigger finger continued directly into the trigger guard, prematurely contacting the trigger.

5 The holster embodiment described herein is designed with the finger-operated end of the blocking lever extending out of the holster at such a position that only the wearer's middle finger (or possibly ring finger) is in position to contact the finger-operated end of the blocking lever. With the wearer's middle finger in the normal position during withdrawal of the handgun, it would be extremely awkward or almost impossible to attempt to operate the blocking lever with the trigger finger. Although the configuration for avoiding inadvertent, premature operation of the trigger by the trigger 10 finger by positioning the finger-operated end at the blocking lever for operation by the middle finger is described in connection with a concealment-type holster, it is applicable to other types of holsters as well.

15 All of these embodiments can provide simple, effective, secondary retention features to most belt worn holsters and possibly other types of holsters, as well.

## BRIEF DESCRIPTION OF THE DRAWINGS

This invention may be more clearly understood with the following detailed description and by reference to the drawings in which:

5            Fig. 1 is an elevational view of a thumb break-type strap holster incorporating the invention and showing its outside face and a secondary handgun restraint, vertical lever type;

            Fig. 2 is a rear view of the holster of Fig. 1;

            Fig. 3 is a fragmentary vertical sectional view taken along line 3-3 of Fig. 1;

10           Fig. 4 is a partial vertical sectional view of the holster of Figs. 1-3 taken along line 4-4 of Fig. 3;

            Fig. 5 is a top view of the holster of Figs. 1-4 taken along line 5-5 of Fig. 4;

            Fig. 6 is a fragmentary vertical sectional view similar to Fig. 3 as a handgun is being withdrawn from the holster of Fig. 1;

15           Fig. 7 is an outer side elevational view of an alternative embodiment holster showing its outside face and a horizontal lever type secondary restraint;

            Fig. 8 is a rear elevational view of the holster of Fig. 7;

            Fig. 9 is a fragmentary vertical sectional view taken along line 9-9 of Fig. 8 with a handgun partly shown in phantom;

20           Fig. 10 is a fragmentary horizontal sectional view taken along line 10-10 of Fig. 9;

            Fig. 11 is a vertical sectional view taken along line 11-11 of Fig. 9 with a handgun in a holstered position;

            Fig. 12 is a vertical sectional view similar to Fig. 11 with the secondary restraint

released and the handgun being withdrawn from the holster of Fig. 7;

Fig. 13 is a fragmentary horizontal sectional view taken along line 13-13 of the holster of Fig. 9 during release of the secondary restraint;

Fig. 14 is an outer side elevational view of a further embodiment having an  
5 outside latching lever holster and a semi-automatic handgun shown partly in phantom;

Fig. 15 is a sectional view of the holster of Fig. 14 taken along line 15-15 of Fig.  
14;

Fig. 16 is a top view partly in section of the holster of Figs. 14 and 15;

Fig. 17 is an inner side elevational view of a concealment or pancake holster  
10 incorporating an inside latching lever of the first class handgun withdrawal restraint with  
a semi-automatic handgun shown partly in phantom;

Fig. 18 is a side view of the holster of Fig. 17;

Fig. 19 is a bottom view, partly in section, of the holster of Figs. 17 and 18 with a  
semi-automatic handgun holstered;

15 Fig. 20 is an inner side view of a concealment or pancake holster incorporating  
an inside second class lever handgun withdrawal restraint and a holstered semi-  
automatic handgun;

Fig. 21 is a sectional view taken along line 21-21 of Fig. 20;

Fig. 22 is a drawing of an individual in the process of beginning to draw a  
20 handgun from the concealment or pancake holster of Figs. 17-19; and

Fig. 23 is a drawing similar to Fig. 22 but showing the handgun partly drawn from  
the holster of Figs. 17-19.



## DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to Fig 1, a holster **10**, with a conventional thumb break strap and a secondary retention device is shown, including a body **11** and a belt loop member **12**, which is preferably of a molded plastic, such as nylon. The holster's belt loop **12** is on a belt **14**. A handgun **16** shown in phantom is inserted into the holster **10**. The body **11** may be of leather, leather-like material or of woven material, such as ballistic nylon. Secured to and forming part of holster **10** is a welt **18** shown in dashed lines. All the holsters shown and described herein are right-hand designs. Left-hand designs would be mirror images of those shown.

Holster **10** in the preferred form is a folded leather or synthetic pouch having an outside face **20**, a front face **22**, which is the folded over part adjacent to the gun sight and the top of the handgun barrel or slide, an inside face **24** (Fig. 2) and a rear surface which, in this case, includes the edge of welt **18** to which the edges of outside face **20** and inside face **24** are secured, preferably by stitching to close the holster **10**. Secured to welt **18**, by means of one or more screws or rivets **26**, is an inboard housing **28** and an outboard guide **102** which may be of metal, such as aluminum, although it could be of another durable material, such as steel or acetyl delrin. Above the inboard housing **28** a portion of the secondary restraint lever **34** may be seen.

Fig. 2 is a view from the rear of holster **10**. As will be seen from this view, an inboard housing **28** is positioned adjacent inner surface of inside face **24** of holster **10** and includes a thumb-operated lever **34** which is pivotally secured to inboard housing **28** by means of a pin **36** (Figs. 3 and 6).

Stitched to inside face **24** is an additional stiffening layer **30** which provides an additional support for attaching belt loop **12** as well as a second leather or synthetic layer for supporting a thumb break snap fastener **32**. Outside face **20** includes a strap **38** carrying the mating part **32M** of snap fastener **32**. Thus, inside face **24** as combined with stiffening layer **30** combines with strap **38** and snap fastener **32** to form a thumb break. An extension of strap **38** wraps over the top of handgun **16** to prevent its removal from holster **10** until the strap is released. This is the conventional thumb break holster operation.

Fig. 3 is a sectional view taken along line 3-3 of Fig. 1. In this view, it will be seen that the inboard housing **28** includes a thumb-operated lever **34** which is pivoted on a pin **36**. Lever **34** is urged by means of a resilient member in the form of a compression spring **40** in a direction to force its contact projection or boss **42** into the space within the trigger guard **44** of handgun **16**. When handgun **16** is seated in holster **10** with thumb break fastener **32** secured, it is held in place both by the thumb break and by the contact boss **42** of lever **34**. The lever **34** is accessible for operation only from the region between the holster body and the belt loop **12**. The user's thumb moves to open the thumb break, and in a continuing downward movement operates the lever **34** to release the handgun.

To withdraw handgun **16** requires that thumb break fastener **32** be opened with the operator's thumb, which is then moved to lever **34**, moving lever **34** in the direction of the arrow of Fig. 3 to release contact boss **42** from trigger guard **44** before handgun **16** can be pulled out of the holster.

Also shown in Fig. 3 is a second screw **46** which fastens welt **18**, inboard

housing **28**, outboard guide **102**, and inside face layer **24** together.

Fig. 4 is a partial sectional view taken along line 4-4 of Fig. 3. This view shows that welt **18** has a cut out **48** at its upper end to receive the trigger guard **44** of handgun **16**. The inboard housing **28** is shown along with lever **34**. Pivot pin **36** and coil spring **40** are shown in phantom.

Fig. 5 is a top view taken along line 5-5 of Fig. 4 and shows inboard housing **28** and outboard guide **102** as seen from the top, including lever **34** shown in its normal position where contact boss **42** is urged by spring **40** into the space for the trigger guard. Pivot pin **36** is shown in dashed line.

Fig. 6 is a fragmentary sectional view similar to Fig. 3 but showing the lever **34** being operated by the thumb of an operator, rotating the contact boss **42** of lever **34** away from the trigger guard area against the force of spring **40**. This releases the trigger guard **44** and permits handgun **16** to be removed from holster **10**.

An alternative embodiment of the invention, with a horizontal lever mechanism, is shown in Figs. 7-13. Referring now to Fig. 7, a holster **60**, which may be similar to holster **10** or it may be made of a trilaminate with an outer cover of a strong fabric, such as ballistic nylon, is suspended from a belt **62** by means of a molded belt loop member **64**, which may be similar to or the same as belt loop member **12** of Fig 1. A handgun **66**, shown in phantom, is carried in the holster **60** and is held in the holster by means of a thumb break which, although of fabric instead of leather, is essentially the same as that described above. An inboard housing **68** is secured to a welt **70** by means of a pair of screws **72**, **74**, welt **70** being fastened between inboard housing and an outboard guide **103** (Fig 10).

Fig. 8 is a view of holster **60**, as seen from the rear. This view shows a fabric outside face **76**, a similar fabric inside face **78** and the molded belt loop member **64** secured to inside face **78**. Inboard housing **68** is shown, including a lever **80**.

Fig. 9 is a sectional view taken along line 9-9 of Fig. 8 and shows lever **80**, which  
5 is secured to inboard housing assembly **68** by means of a pivot pin **85**. A projection **82** on a second lever **108** extends within the trigger guard **84** of handgun **66**.

Fig. 10 is a sectional view taken along line 10-10 of Fig. 9 and shows the inboard housing **68** and lever **80** as seen from above. This view shows lever **80** in its normal position resting against lever **108** with a compression spring **86** urging projection **82** into  
10 the space within trigger guard **84**. It will be observed that the outboard guide **103** has a ledge **88** which serves as a stop for trigger guard **84** as handgun **66** is placed in the holster **60**.

Fig. 11 is a sectional view taken along line 11-11 of Fig. 9 and shows inboard housing **68** secured to inner face **78** with projection **82** of lever **108** urged into the space  
15 behind trigger guard **84** by spring **86**, to hold the gun in position.

Fig. 12 is the same view as Fig. 11 but showing projection **82** of lever **108** moved clear of the trigger guard **84** and permitting handgun **66** to be removed from holster **60**. In this view, the spring **86** is compressed.

Fig. 13 is a view similar to Fig. 10 but showing that the operator has moved lever  
20 **80** in the direction shown by the arrow of Fig. 10 causing lever **80** to pivot around pin **85** moving lever **108** to compress spring **86**, and moving the projection **82** out of the space through which the trigger guard must move to release handgun **66** from holster **60**.

From the foregoing, it will be seen that the structures described above provide

simple and straightforward secondary latches for securing a handgun in a holster in addition to the well-known thumb break. The structure is durable and uncomplicated and, with either embodiment, easy and natural for a user to operate. Note that the outboard guides **102** and **103** serve both to locate the handgun in a position to restrain the handgun in place but also prevent any twisting motion of the handgun that could defeat the retention.

A third embodiment of the present invention shown in Figs. 14-16 utilizes a finger-operated latching lever positioned on the outside of the holster. Fig. 14 shows a holster **110** which, in its preferred form, is a folded leather or synthetic pouch having an outside face **120**, a front face **122**, an inside face **124** (Fig. 15), and a rear surface which includes a welt **118** to which the edges of outside face **120** and inside face **124** are secured, such as by stitching to close holster **110**.

Secured to welt **118** by means of one or more screws or rivets **126** is an inboard guide member **128** and an outboard guide **130** which may be of metal, such as aluminum, although it could be of another durable material, such as steel or acetyl delrin. A handgun **116** is shown positioned in holster **110**, including a trigger guard **144**. Also visible in this view is a lever **134** positioned in a cut out **136** of outboard guide **130**. Lever **134** is supported on a dowel pin **138** carried in outboard guide **130** and best seen in Figs. 15 and 16.

Fig. 15 is a sectional view taken along line 15-15 of Fig. 14. As seen in this view, the inside face **124** is carried next to the wearer **W**. A belt-loop member is not shown but could well be identical to belt loop member **12** of Fig. 2 and secured to the belt **112** of wearer **W**. In this view, the lever **134** is shown pivotable on dowel pin **138** between a

first position where the lever tip **140** blocks trigger guard **144**, and a second position where lever tip **140** is moved out of the trigger guard space enabling the handgun **116** to be withdrawn from holster **110**. Set in small wells or depressions in outboard guide **130** and lever **134** is a coil spring **146** which urges lever tip **140** into the space blocking  
5 trigger guard. To release handgun **116**, the wearer **W** applies finger pressure to the surface **134S** of lever **134**, rotating the lever against the force of coil spring **146** to move lever tip **140** clear of trigger guard **144**.

Fig. 16 is a top view of holster **110** with handgun **116** removed. Visible in this view are outside face **120**, inside face **124**, outboard guide **130**, and inboard guide **128**.  
10 The lever **134** is shown with fulcrum, dowel pin **138** shown in dotted lines to indicate that it is concealed within outboard guide **130**.

The embodiment of Figs. 14, 15 and 16 has been shown and described as applied to a holster which does not employ a strap and thumb break arrangement like that described in connection with Figs. 1 and 2 or Figs. 7 and 8; however, it will be  
15 appreciated by those skilled in the art that such additional restraint means can readily be adapted to the holster of Figs. 14, 15, and 16.

An additional embodiment of the present invention utilizes a housing and blocking lever similar to those described above in combination with a significantly different type of holster known as a concealment holster. This embodiment is also  
20 applicable to many other types of holsters, including paddle holsters and other holsters for revolvers as well as semi-automatic handguns. A pancake-type concealment holster **150** is shown in Figs. 17, 18, and 19 and includes two generally planar body members including an inside or rear panel **152** (Fig. 18) and a front or outside panel **154**, these

panels being separate members which are sewn together to form a pouch for receiving a handgun **156**. Spaced slots **153** and **155** are cut in panels **152** and **154** to provide for attaching holster **150** to a wearer's belt and to hold the holster adjacent to a wearer's body.

5           Secured to the inside of holster **150** is an inboard housing **158**, best seen in Fig. 18, which includes a guide or slot **160** forming a trigger guard region and a surface **162** located to form a stop for the trigger guard **164** of handgun **156**. Carried in inboard housing **158** is a lever **166** of Figs. 17 and 19 pivotally mounted on a pin **168**. Lever **166** includes a blocking projection or end **166B** and a finger-operated end **166A**  
10   extending out of front and rear body panels **152** and **154** away from trigger guard **164**. A slide and a barrel-containing region are shown at numeral **167**.

As is more clearly shown in the top view, Fig. 19, lever **166** pivots around a pin **168** serving as a fulcrum device from a first position, shown in solid outline in which the blocking projection **166B** extends into the space behind the trigger guard **164** to a  
15   second position in which blocking projection **166B** is moved out of the way of the trigger guard. Lever **166** is urged toward its blocking position by means of a coil spring **170**. When handgun **156** is placed in holster **150**, trigger guard **164** is directed into slot **160** and is pushed past blocking projection **166B**, which then snaps behind the front part of trigger guard **164**, effectively capturing it so that handgun **156** cannot be pulled directly  
20   out of holster **150**.

To remove handgun **156** from holster **150**, the wearer must grasp the grip of the handgun, while at the same time pressing the finger-operated end **166A** of lever **166** to cause lever **166** to rotate around pin **168** against the force of spring **170**, moving the

blocking projection **166B** away from trigger guard **164**. The lever **166** is positioned so that the finger-operated end **166A** is conveniently accessed with the wearer's middle finger but the first or trigger finger is essentially inaccessible to the trigger guard region of the handgun, as is illustrated in Figs. 22 and 23, described below.

5            Fig. 20 is an inner side elevational view of an alternative embodiment of pancake holster from that of Figs. 17-19; and Fig. 21 is a sectional view taken along line 21-21 of Fig. 20. The holster **180** of Figs. 20 and 21 is shown with a semi-automatic handgun shown in normal, holstered position and the holster includes an inside panel **182**, and an outside panel **184** sewn together to provide the handgun-holding pocket for receiving  
10    a handgun **186**. Slots **188** and **190** are provided for attaching holster **180** to a wearer's belt.

             Secured between panels **182** and **184** are an inside guide **192** and an outside guide **194**, which define a slot for receiving the trigger guard **195** of handgun **186**. Inside guide **192** carries on its lower end, a dowel pin **196** serving as a fulcrum  
15    supporting a lever **200** able to pivot over a limited range against the force of a coil spring **198**. Lever **200** includes a projection or cleat **202** which, under the urging of coil spring **198**, is moved into a position within trigger guard **195** where it engages the trigger guard of the holstered handgun and prevents handgun **186** from being removed from holster **180**. It will be recognized that holster **180** of Figs. 20 and 21 differs from  
20    holster **150** of Figs. 17, 18 and 19 in that lever **200** is a second class lever. Lever **166** of Figs. 17, 18 and 19 is a first class lever. The finger-operated end **204** of lever **200** is positioned for operation by the wearer's middle finger, as described above.

             Fig. 22 shows an individual **I** with his right hand on the grip of handgun **156**



preparing to remove it from holster **150** of Figs. 17-19. It will be noted that the individual's first or trigger finger **TF** lies along a small recess **151** on the outside of the holster generally paralleling the slide or barrel of a holstered handgun and away from the trigger guard **164**, while the middle finger **MF** is positioned to press against the  
5 finger-operated end **166A** of lever **166**. It is also possible for the individual's ring finger to reach end **166A**, but the trigger finger is too remote from the lever end **166A** to operate it, while the individual normally grasps the grip of the handgun.

Fig. 23 is a drawing showing the individual having partly removed the handgun **156** and with his middle finger **MF** pressed against finger-operated end **166A** of lever  
10 **166** to keep lever **166** in a position where its blocking end **166B** is clear of trigger guard **164**. The trigger finger **TF** is effectively spaced from the handgun trigger until the handgun is nearly fully withdrawn from the holster. This feature eliminates the trigger finger from being pressed inward to operate any release lever and inadvertently entering the finger guard, while releasing the handgun restraint.

15 The above-described embodiments of the present invention are merely descriptive of its principles and are not to be considered limiting. The scope of the present invention instead shall be determined from the scope of the following claims including their equivalents.